

Henry's Fork Watershed Council Notes 10/22/2019

Introductions and Community Building

Brandon Hoffner (Henry's Fork Foundation) welcomed everyone to the October Watershed Council meeting, explaining that the Henry's Fork Watershed Council is co-facilitated by the Henry's Fork Foundation and Fremont-Madison Irrigation District. The Council has a long history of trust building and the group tries to set a tone of respect at each meeting. Attendees are asked to keep the conversation respectful.

The meeting was then opened for announcements or comments in advance of the presentations.

BC Contor shared that, as many already know, it has been a tough fall for our local farming community.

Brandon Hoffner explained that he is working with Amy Verbeten (FTR) and Aaron Dalling (FMID) on the HFWC annual conference logistics. A date is still TBD, but potential dates include December 5 or 10. The focus of the annual conference will be interaction with NRCS and local agricultural producers, what the new Farm Bill looks like and how that can be implemented here in the Henry's Fork Watershed. If anyone has ideas for speakers for the conference, please email council@henrysfork.org.

Keith Esplin shared that he attended the state technical advisory committee meeting for NRCS. NRCS is modernizing systems to do conservation. They are also working to strengthen local groups. The Henry's Fork group has a meeting organized and is coming up soon. They are advocating to not convert to sprinklers on the Snake River Plain. It seems they have listened to recent science and have stopped converting, except in special circumstances. They are working on modernizing flood irrigation.

Brennan Summers shared that Congressman Simpson is getting ready to introduce a bill called the Farm Workforce Modernization Act in an effort to improve the way workers get visas and to address the workforce shortage.

Aaron Dalling shared that Fremont-Madison Irrigation District submitted and received a grant for irrigation technology and would like to thank Congressman Simpson for signing a letter of support for that grant.

Year End Water Summary

Rob Van Kirk, Henry's Fork Foundation

Climate: Record-breaking February snow, springtime temperature 2 degrees below average, and heavy precipitation in September. Mean temperature for water year 2019 was equal to the 1989-2018 average, but mean April-June temperature was 2 degrees F below average.

Natural streamflow: 98% of average: 97% in upper Henry's, 103% in Fall River, and 96% in Teton River. Snowmelt in Fall and Teton rivers lasted into July. Upper Henry's Fork water supply was above the 1930-2019 average for the first time since 2012.

Irrigation Management: Draft of Island Park Reservoir started 9 days later than average and ended 4 days earlier than average. Over the period of draft, streamflow in the Henry's Fork at St. Anthony averaged 1,070 cfs, compared with this year's target of 1,000 cfs.

Island Park Reservoir: Ended the water year 73% full, compared with 46% full on average. Outflow during the upcoming winter is expected to be 500-550 cfs for the third consecutive year.

Predictive Model Performance: Based only on April 1 conditions, my predictions for most key hydrologic parameters were within 10% of actual values except those directly affected by spring and summer weather. The model over-predicted natural flow by 8.1% and Island Park Reservoir carryover by 6.8%.

Upper Snake River Reservoir Operations

Brian Stevens, U.S. Bureau of Reclamation

Current reservoir system storage is 125% of average for this time of year, and it is concentrated in the upper part of the system. Storage in Palisades, Jackson, and Island Park is around 150% of average, which is desirable because that water can always be moved downstream if needed. Last year, Island Park Reservoir reached its April-1 target volume on December 1, and the reservoir was held constant all winter. Some space was evacuated in the late winter and early spring in anticipation of high inflow. Models over-predicted springtime inflow, so outflow was lowered after delivery of a brief freshet in late April. The reservoir filled on June 3 and remained full until July 12. Looking ahead, precipitation over the last three months has been in the range of 120-150% of average in the upper Snake River basin. Current soil moisture is around 3 percentage points better than last year at this time. Current extended outlooks call for cold, dry weather over the next two weeks, near-average conditions for the month of November, and warm and generally wet weather over the November through January time frame. So at this point, a wide variety of conditions are possible for the beginning of the winter. Anticipated reservoir operations will be similar to last year across the reservoir system. Island Park will be filled to roughly 120,000 ac-ft over the next six weeks and then held constant over the winter by passing inflow. That will result in an outflow of around 500 cfs from December through March. Normal winter operations are expected for the other reservoirs. Outflows will be reduced to winter levels within the next two weeks. These are 280 cfs at Jackson, 900 cfs at Palisades, 375 cfs at American Falls, and 550 cfs at Minidoka. Some of the Minidoka release will

spill at Milner Dam while some canal maintenance is done over the next few weeks, after which time all of the Minidoka release will be diverted for managed aquifer recharge.

Confluence Ranch Property and Henry's Fork Greenway

Monica Zimmerman, Bureau of Land Management

The Bureau of Land Management (BLM) recently acquired land on the Teton River called Confluence Ranch with funds from the Land and Water Conservation Fund (LWCF). These funds come from off shore oil and gas drilling. The ~700-acre property is located between the confluences of Bitch Creek and Badger Creek with the Teton River. The property is a key migration corridor for animals, including wintering mule deer, and provides great opportunities for public access to other BLM lands and the adjacent rivers and creeks. This winter there will be an Environmental Assessment (EA) to determine the best way to develop access and what it would look like. The BLM would also like a parking area that would allow the public to access drainages from there.

The City of St. Anthony applied for and received a FLAP grant to improve access to recreation activities, which allowed them to conduct a bridge feasibility study along the Henry's Fork Greenway. The BLM is involved because the area in question includes BLM managed lands. The city would like to connect the north and south sides of the greenway and the feasibility study assessed a few potential options. One option would be to construct a new pedestrian bridge downstream of the existing railroad bridge. A second option would be to obtain the existing railroad bridge from East Idaho Railroad. This option is currently the least expensive option at about \$300,000. Another option is to construct three bridges to connect through a braided section of the Henry's Fork. The bridges would be 350, 150 and 175 feet in length with trails on the islands between them. This option is quite a bit more expensive at over \$3 million. The final option was to construct a bridge just upstream of a diversion. This bridge would be over 600 feet long with multiple abutments in the river and would cost over \$3 million. The next grant cycle is 2021, so they are still a few years away from applying. The project would go through a public scoping process if/after they receive the grant funding. Patti Parkinson is the city contact for the project.

Henry's Fork Foundation South Fork Initiative Update

Bryce Oldemeyer, Henry's Fork Foundation

In 2019, the Henry's Fork Foundation - South Fork Initiative focused on three major monitoring and restoration projects; macroinvertebrate monitoring, water quality monitoring, and restoration projects on Rainey Creek.

In February 2019, the SFI conducted macroinvertebrate sampling at three sites within the South Fork Snake. The samples were sent to a lab and data were received in August. A full discussion of 2019 results can be found here <https://henrysfork.org/south-fork-snake-river-macroinvertebrate-study-2019>

The SFI installed one Sonde (water quality equipment) along the South Fork Snake just upstream of the confluence of Palisades Cr. They weren't able to install a low-water installation before flows increased in the spring so the sonde needed to be pulled when flows dropped below ~8,000 cfs. A new installation will be installed in Dec 2019, along with two other installations below the Canyon Reach and one by Lorenzo. The three sondes should be installed and transferring data to the Henry's Fork Foundation water quality website by January 2020.

Last, the SFI, along with several partners, have been working on several restorations projects within the Rainey Cr. drainage (major trib to the South Fork) to improve water quality and habitat for native species. Last year, the working group of partners completed a half mile restoration along Third Cr. After the restoration was complete, August temperatures decreased ~8 C and 51 salmonids were utilizing the habitat. Prior to the restoration, no salmonids were found in the reach. The working group also completed the design and assessment on three more projects in 2019 and plan to begin moving ground on the projects in 2020.

FMID Managed Aquifer Recharge

Aaron Dalling, Fremont-Madison Irrigation District

FMID's partners in managed aquifer recharge are Idaho Water Resource Board (IWRB), various groundwater districts, Coalition of Cities, Idaho Ground Water Appropriators (IGWA), Bureau of Land Management (BLM), and Idaho Department of Environmental Quality. Water for FMID's managed recharge comes from four administrative sources: 1) IWRB managed recharge water rights, 2) storage water, 3) temporary water rights, and 4) FMID's own managed recharge right. Most of FMID's recharge over the past three years has used the IWRB right, but some has come from mitigation water donated by IGWA or storage leased by the cities or groundwater districts. FMID's recharge water right is not yet permitted but will be very soon, as all outstanding protests have now been resolved. FMID recharged about 130,000 ac-ft in 2017, 98,000 ac-ft in 2018, and 55,000 ac-ft so far in 2019. A total of 65,000 ac-ft is anticipated by the end of 2019. Around 5,000-15,000 ac-ft per year has been diverted from each of Fall River and Teton River, with the remainder coming from the Henry's Fork. Some recharge is being done in the Wilford/Sugar City area, but most has been done at Egin, using the Egin Bench canal system. In 2018, around 3,500-5,500 ac-ft was recharged at Egin between May and October. This recharge is being done at the "old" Egin Lakes site, the "new" site developed with financial support from the IWRB, and Tibbitts Pond. In particular, IWRB funded construction of a canal to deliver water from the St. Anthony Union Canal to the new recharge site. The Watershed Council has discussed aspects of that project in the past, including the potential expansion of that site into the adjacent BLM Wilderness Study Area (WSA). Currently, a berm prevents the recharge water from extending westward into the WSA. The IWRB has also funded construction of an additional ditch to allow water at the new recharge site to flow back toward the south and west on private land to allow more infiltration capacity. Using this land will require construction of more berms to prevent water from spilling onto adjacent farmland and county roads. Recharge done outside of irrigation season can use canal seepage in addition to delivery to the recharge sites, and in 2017, the distribution was roughly 45% in-canal recharge and 55% designated-site recharge. Idaho Department of Environmental Quality is monitoring fecal

coliforms and nitrate/nitrate concentrations in monitoring wells near the recharge sites. Results suggest that concentrations are highest during late fall and winter, when little recharge is done, and lowest during the middle of the summer. Over the Eastern Snake Plain Aquifer (ESPA) as a whole, water levels increased between 2017 and 2018 but generally declined again between 2018 and 2019. However, in the upper part of the aquifer, and especially in the Mud Lake area, water levels stayed roughly constant or even increased a bit between 2018 and 2019, despite declines elsewhere in the aquifer. This is possibly due to recharge at Egin. Over the period between spring of 2015 and spring of 2019, water levels have generally increased across the whole ESPA, in response to a combination of good water years and managed aquifer recharge.

Groundwater Management Area

Jerry Rigby, Rigby, Andrus & Rigby Law, PLLC

Jerry works for a water rights firm in Rexburg that was involved in the Groundwater Management Area decision, including its designation and they oppose the designation as unnecessary. The Groundwater Management Area is layered on top of the Settlement Agreement between the groundwater users and surface water coalition that called for curtailment or mitigation to restore the Eastern Snake Plain Aquifer. The Groundwater Management Area decision created Madison and Henry's Fork Groundwater Districts in our area. Idaho Code states the Director of the Idaho Department of Water Resources should only designate Groundwater District when "approaching the conditions of a critical ground water area", which Jerry's firm does not believe the entire Snake River Plain falls into. This is why they do not agree that the entire Snake River Plain should have been designated. Also, in the decision, the Eastern Snake Plain Aquifer Groundwater Management Area was expanded and is larger than the traditional definition of the Eastern Snake Plain Aquifer. The expanded version includes the Rexburg bench and other areas that are not typically included.

Farms and Fish Program Update

BC Contor, Henry's Fork Foundation/Friends of the Teton River

The Farms and Fish program includes activities in the Ashton area to help keep more physical water in storage in Island Park Reservoir in the fall, and in Teton Valley to improve soil health and reduce sediment contributions to the river. In Teton Valley we continue with cover crops, no-till planting, and new for 2019 we have multiple-year agreements for conversion of grain lands to perennial multi-species forage plantings with grazing instead of mechanical harvest. In Ashton we've continued water-use agreements to directly limit irrigation on selected parcels, incentivized planting of winter wheat (which matures earlier) instead of spring grain, which needs to be irrigated later while the reservoir is typically drafted. Along with the irrigator and Fall River Electric, we've helped pay the cost for one Low Elevation Sprinkler Application (LESA) system. With the help of a great intern from Iowa State University, we've collected data to confirm that the water-savings documented elsewhere will occur in Ashton, and that crops will be successful here. Our primary focus was to test a concern that the LESA would export warmer, drier air to neighbors, causing them to irrigate more and offset the benefits on the

LESA system itself. The LESA pivot did not appear to harm yields or quality. Two of three measures indicate it did save water, and we will resolve the discrepancy this winter. The intern confirmed that the LESA does export warmer, drier air, but differences are small. We still need to calculate the practical effect on evapotranspiration and irrigation, and determine how far downwind the effects persist. If all goes well, helping fund LESA systems may be an opportunity to make one-time investments that generate a time-series of ongoing water savings.

Community Building and Wrap Up

Brandon Hoffner called for one minute of silence to reflect on the meeting and prepare any final announcements or comments.

Keith Esplin asked if Russian Olive is an issue in the Henry's Fork Watershed explaining that Brian Olmstead of the Twin Falls Canal Company would like to see them listed as invasive/noxious because it might help provide funding to control them.

Brandon Hoffner added that Brian did not want landowners to be liable, but wants more opportunity for funding assistance.

Monica Zimmerman replied that Russian Olive is an issue on the lower Henry's Fork and on the South Fork Snake River and BLM has a pretty active program removing Russian Olive on the South Fork. She added that they haven't made it to the lower Henry's Fork yet, but are working their way down.

Brandon Hoffner asked for more clear definitions of "hydrologically" and "hydraulically" for the group.

Rob Van Kirk (HFF) and BC Contor (HFF/FTR) explained an example of water in a bath tub. If a cup of water is added to the tub it causes a splash of water that might move from one end of the tub to the other. The water in the tub is hydraulically connected, but the tub water is not hydraulically connected to the water in the cup. However, the water in the cup and water in the tub are hydrologically connected.